

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-081566

(43)Date of publication of application : 21.03.2000

(51)Int.Cl.

G02B 13/00

G02B 5/18

G02B 13/18

G11B 7/135

(21)Application number : 11-177546

(71)Applicant : ASAHI OPTICAL CO LTD

(22)Date of filing : 23.06.1999

(72)Inventor : MARUYAMA KOICHI

(30)Priority

Priority number : 10218490

Priority date : 26.06.1998

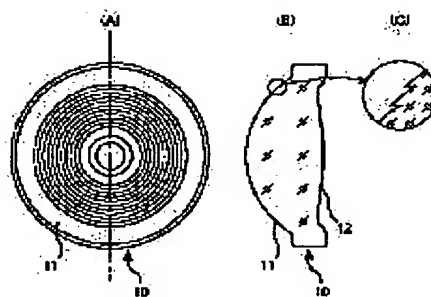
Priority country : JP

## (54) OBJECT LENS FOR OPTICAL HEAD

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an object lens having a high utilization efficiency of light, permitting to record and reproduce a plurality of optical information recording media which is different in protective layer thickness such as DVD and CDR by a single object lens.

SOLUTION: The object lens 10 a single lens made of resin with aspheric surfaces on both sides, and a diffraction lens structure of a concentric ring belt pattern is formed centering the optical axis on one lens surface 11. The diffraction lens has wavelength dependency so that diffracted light of the same order number of at least two different wavelength light fluxes forms good wavefronts respectively to at least two kinds of optical disks which is different in the thickness of the protective layer.



## LEGAL STATUS

[Date of request for examination]

14.01.2003

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]